CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

May 2, 2000

Mr. Les Toth
5546 Old Salt Ln
Agoura Hills, CA 91301

Dear Mr. Toth:

THREE MOUNTAIN POWER PROJECT DATA REQUESTS No. 115 THROUGH 127

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission (Energy Commission) staff requests that the Three Mountain Power Project, Limited Liability Company supply the information specified in the enclosed data requests (Data Requests 115 through 127). These data requests address soil & water and biological resources.

Written responses to the enclosed data requests are due to the Energy Commission by May 17, 2000 or at such date as may be agreed upon by the Energy Commission staff and the applicant. Although applicants are usually provided 30 days to respond to data requests, the current schedule for publication of the FSA requires these responses by May 17. If they are provided any later, staff will not be able to incorporate them into the FSA, and the FSA will identify a lack of this information as a deficiency in affecting staff's conclusion. Staff will be available to answer questions regarding the data requests and the level of detail required to answer the requests satisfactorily at the scheduled workshop on May 10, 2000 in Burney California. Also enclosed is staff's draft proposal for a proposed voluntary wood stove replacement program, which staff proposes to discuss at the workshop on May 10, 2000.

If you are unable to provide the information requested in the data requests or object to providing it, you must, within 15 days of receiving these requests, send a written notice of your inability or objection(s) to both Chairman William J. Keese, Presiding Member of the Committee for this proceeding, and me. The notification must also contain the reasons for not providing the information and the grounds for any objections (see Title 20, California Code of Regulations section 1716 (e)).

If you have any questions regarding the enclosed data requests, please call me at (916) 653-1614.

Sincerely,

Richard Buell
Siting Project Manager

Enclosure

cc: Proof of Service 99-AFC-2

RKB:rkb
Datareq8.doc

THREE MOUNTAIN POWER PLANT (99-AFC-2)
DATA REQUESTS

Technical Area: Soil and Water Resources
Author: Linda Bond

BACKGROUND

There appears to be several inconsistencies in the description and analysis of specific well capacity data between Lawrence and Associates (1999), CH2MHill (1988) and Dames & Moore (2000).

DATA REQUESTS

115. Dames & Moore reference specific capacity tests reported by CH2MHill (1988). Dames & Moore indicate that 11 wells have a specific capacity of greater than 5,000 gpm/ft (Table 4, page 2-11). However, the table presented by CH2MHill (Table 3, page 7) indicates only one well that has a specific capacity of greater than 5,000 gpm/ft. Please explain the basis for concluding that all 11 wells have a specific capacity of greater than 5,000 gpm/ft.

116. Dame & Moore states that "most of the wells where drawdown was measurable have specific capacities ranging from 50 to 500 gpm/ft." However, only 8 of the 36 wells have a specific capacity of 50 to 500 gpm/ft. Please correct the text or explain how 8 out of 36 tests represents a majority of the wells tested.

117. Please explain the basis for using the 36 well capacities listed by CH2MHill in the introductory description of the Burney Aquifer, while the 53 well capacities listed by Lawrence and Associates (Appendix A) of the AFC (Appendix J, 4/19/1999) were used in the calculation of hydraulic conductivity, regional flow, and aquifer storage.

118. What was the basis for the selection of wells listed in Table 9 (Lawrence) that were used by both Lawrence and Dames & Moore for the calculation of effective transmissivity and hydraulic conductivity for the basin?

119. Please provide the average and median transmissivity and hydraulic conductivity using all of the wells listed in Appendix A of the AFC (Appendix J, 4/19/2000).

BACKGROUND

To assess the effectiveness of the groundwater-monitoring plan, well completion information is needed on the existing wells that are proposed for up-gradient monitoring.

DATA REQUEST

120. Please provide well construction information for well MRRR-1 and well BMP-1.

Technical Area: Biological Resources
Author: Linda Spiegel

BACKGROUND

The project has the potential to impact federally listed species, and therefore, consultation with USFWS is required. To date, staff has not received confirmation that consultation has been initiated. Failure to do so could greatly delay the project schedule.

DATA REQUEST

121. Please provide confirmation that consultation with USFWS has been initiated.

BACKGROUND

A Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) that provides a very detailed account of how mitigation will be implemented is required for review and approval by Energy Commission staff, in consultation with CDFG, and USFWS.

DATA REQUEST

122. Please provide a final draft of the BRMIMP.

BACKGROUND

The revised Raptor Management Plan (2/2/00) states that "…the project will not have any impact beyond existing conditions. Moreover, the diameter of the new conducting lines will be slightly larger than the existing lines, and the larger lines will almost certainly reduce existing (hypothetical) collision rates since birds will be able to detect the larger lines" (pg 3). Based on this, the report concludes that no long-term monitoring is required. The line crosses habitat that supports several avian species, including listed and/or migratory birds. Existing conditions or current bird collisions could be significant. Currently, this line is not permitted by the USFWS. The diameter of the existing line is 1.0 inches and the diameter of the new line will be 1.092 inches.

DATA REQUEST

123. Please describe the existing conditions.

124. Please substantiate or document your conclusion that a difference of 0.09 inches will result in a decrease in bird collisions.

BACKGROUND

The Lawrence & Associates report of *Waste Discharge for Evaporation Ponds at Three Mountain Power, Shasta County California* provides concentrations of metals in the wastewater (Appendix B). The report does not describe how the pond will be constructed to prevent birds from being harmed by exposure to contamination in the ponds. Such methods could include steep-walled sides and periodic seining of avian food sources from the pond.

DATA REQUEST

125. Please provide an analysis of potential impacts of the waste water to birds, including a discussion of bioaccumulation and biomagnification factors.

126. Please provide a description of methods that will be used to prevent birds from feeding in the pond.

BACKGROUND

The Dames and Moore report on Water Supply Evaluation for the Proposed Three Mountain Power Plant, Burney, California states that the Burney watershed boundary is not well defined along the topographic divide between the drainage to Burney Creek to the west and Hat Creek to the east. Additionally, there appears to be a substantial amount of water unaccounted for in the water balance. Therefore, it appears some water could be flowing from the Burney Creek groundwater basin and the Hat Creek groundwater basin. Springs in these areas could support federally listed species, but have not been documented or surveyed.

DATA REQUEST

127. Please provide a map of all springs in the area between the power plant site and Burney Falls to the north and Hat Creek to the east. Describe the flow (cfs), substrate (see USFWS Recovery Plan for Shasta Crayfish, Appendix D), vegetation, crayfish, molluscs, and other invertebrates observed.

PROPOSED VOLUNTARY WOOD STOVE REPLACEMENT PROGRAM

THE PROJECT

Three Mountain Power Project (TMPP) is a nominal 500 megawatt natural gas-fired, combined-cycle power plant comprised combustion turbines, one steam turbine, and supporting equipment. TMPP is expected to emit 167 tons per year of particulate matter (PM10), which could create significant adverse impacts. Staff is investigating all feasible means of reducing any impacts to a level of insignificance.

THE PROBLEM

The Burney area experiences numerous violations of the state PM10 ambient air quality standards. From 1989 through 1993 the data show that PM10 violations occurred primarily between the months of November through March when the weather is cold. The Burney area experiences a low inversion layer during these cold months. This low inversion layer traps the air pollutants causing them to accumulate, which in turn contributes to the violations of the PM10 air quality standard.

To mitigate the project's PM10 emission impacts, staff recommends that the applicant implement a combination of road paving and retrofitting of residential wood burning devices used in the Burney area. This paper outlines the main concepts of the voluntary wood stove replacement program.

HOW THE PROGRAM WORKS:

Basically, the new wood stoves, called "EPA Phase II Certified Units", burn much more cleanly and efficiently than older units that are not EPA certified. Thus, replacing the older units with the new units will result in both lower emissions and a reduction in the amount of wood being burned. These emission reductions will mitigate part of the project's PM10 and volatile organic compound (VOC) emissions.

THE PROGRAM:

Staff suggests that the applicant design and market a program, which would achieve the following goals:

- The program will last for three years or until the available funds ($700,000.00) are exhausted, or 500 units have been installed, whichever comes first.
- Any funds remaining will be used for road paving as designated by the California Energy Commission in consultation with the Shasta Air Quality Management District, or for other measures as agreed to by those parties and TMPP.
- The program is strictly on a voluntary basis to willing residents of Burney and Johnson Park.

- Each resident participating in the program will be eligible to receive an EPA Phase II Certified wood stove unit installed, free of charge or up to a total of $1,500.00 cost toward a more expansive model, whichever is less.
- Priority will be given to retailers and licensed installers who have businesses in the Burney area to sell and install the new wood stoves, and remove the old wood stoves.
- Each resident participating in the program would only do business with the retailer and the professional, licensed installer.
- The retailer must certify that he or she has rendered all old wood stoves replaced non-operative by permanent removal of the stove doors.
- The retailers are required to keep records of old wood stove units being removed and installation of the new units, and submit those records to TMPP on a weekly basis for reimbursement.

HOW STAFF ARRIVED AT THE 500 UNITS

Criteria: To achieve a total of 179 TPY PM10 (including 10TPY of S0x) offsets. These offsets will be broken down to 134 TPY to be provided with road paving for the three dry calendar quarters, and 45 TPY will be provided by the installation of new wood stoves for one wet calendar quarter.

Known data (reference EPA AP-42, Table 1.10-1):

1. conventional wood stove = 30.6 lb PM10/ton, and 53 lb VOC/ton
2. non-catalytic wood stove phase II certified = 14.6 lb PM10/ton, and 12 lb VOC/ton
3. burn 8 cords/year each (information taken from local residents at workshops)
4. each cord = 1400 kg

Calculations:

- Convert from cord to tonnage of wood:

$$\frac{8 cords}{yr} * \frac{1400 kg}{cord} * \frac{2.205 lb}{kg} * \frac{ton}{2000 lb} = 12.35 \frac{tons}{yr}$$

- Emissions reduction per wood stove conversion:

$$\Delta \dot{E} = (\frac{30.6 lb PM_{10}}{ton} - \frac{14.6 lb PM_{10}}{ton}) * \frac{12.35 ton}{yr} = \frac{197.6 lb PM_{10}}{unit * yr}$$

- Numbers of unit needed:

$$\frac{45ton}{yr} * \frac{2000lb}{ton} * \frac{unit}{197lbPM_{10}} = 455units$$

- Cost:

  @ low $900/unit =$410,000
  @ high $1500/unit = $685,000

- VOC emission reduction for 455 units conversion:

$$\Delta \dot{E} = (\frac{53lb}{ton} - \frac{12lb}{ton}) * 455units * \frac{12.35ton}{yr} = 230{,}400lb = 115tons$$

$$\Delta \dot{E} = 115tons \text{ VOC}$$